ASOS MODIFICATION NOTE 29 (for Electronics Technicians)
Engineering Division
W/OSO321:BGM

SUBJECT	:	Installation of 3K ohm resistor on wind sensor
PURPOSE	:	Eliminate the wind sensor data quality error caused by under current condition.
EQUIPMENT AFFECTED	:	ASOS wind sensor
PARTS REQUIRED	:	1 (ea) Resistor 3K ohm 10 watt or 2 (ea) 6K ohm 5 watt resistors.
MOD PROCUREMENT	:	None
SPECIAL TOOLS REQUIRED	:	None
TIME REQUIRED	:	1 hour
EFFECT ON OTHER INSTRUCTIONS	:	None
AUTHORIZATION	:	This modification is authorized by ECP APOO3 (SOO683). Approved with Changes by SRG on 6/15/95
VERIFICATION STATEMENT	:	Modification was tested at two sites; SAT and ELP

General:

The purpose of this modification note is to provide installation instructions for a 3K ohm 10 watt resistor or two 6K ohm 5 watt resistors in parallel in the wind sensor electronics enclosure. The resistor is placed between the line out and ground on the EMI filter E2. Wind sensor data quality errors caused by an undercurrent condition will be eliminated. The resistors are to be purchased locally. This modification should be implemented only on systems that are experiencing chronic SYSLOG reports “ST 0367 DCP #1 Wind sensor power commanded ON remained OFF” and are being commissioned prior to 9/15/95. ACU firmware version 2.2 will correct the data quality error reporting. The resistor(s) will be removed as a part of the ACU firmware version 2.2 modification note.

BEFORE BEGINNING PROCEDURE

1. Get approval of the responsible MIC/OIC before starting deactivation. You may complete modification on any day of the month if permission is granted and the restrictions in steps 3 and 4 are complied with.

2. **Commissioned Sites Only**: Do **not** start during bad weather, precipitation, instrument flight rule (IFR) conditions, or if any of those conditions is expected within 3 hours. These meteorological conditions will be defined by the responsible MIC/OIC.

3. Do not start at a time that will conflict with scheduled synoptic observations at 00, 03, 06, 09, 12, 15, 18, and 21Z. Although 10 minutes should be sufficient, allow 0.5 hour to complete.

4. Immediately before beginning work at NWS staffed sites, the MIC/OIC/ observer will inform the tower and any other critical users that the wind sensor will be shut off (unstaffed sites, the el tech will inform tower).

5 Do not begin until immediately after an hourly observation has been transmitted. At NWS-staffed sites, normal backup observing procedures will be implemented.

6. Call the AOMC at 1-800-242-8194. Inform the person who answers the phone at which office you will be completing modification note 29.

7. Log on as TECH, turn OFF report processing for the wind sensor.

    1. Key the **MAINT** screen
    2. Key the **ACTION** page.
    3. Press the **Start** key
    4. Exit, log off as **TECH**.

Procedure:

1. Remove the power to the wind sensor inside the DCP cabinet. Ensure that the circuit breaker is set to the right, for the **OFF** position.

2. Reference the ASOS Site Technical Manual, chapter 4, page 4-7, figure 4.2.1 to open the wind sensor electronics enclosure. Use a Phillips screw driver No.1, and remove the six screws from the power input box access cover.

3. Reference the ASOS Site Technical Manual, chapter 4, page 4-20.1, figure 4.4.2., wind sensor block diagram (sheet 2 of 2) change 2.

Note:

A line is shown drawn across Line Out (LO) and Ground (GND) on the EMI filter E2; this line should be removed from the figure.

4. Locate EMI filter E2 in the power input box A1. Remove the nuts from the terminals marked LO and GND.

5. Install the 3k ohm 10 watt resistor between the LO and GND terminals. Wrap the resistor leads around the LO and GND terminals. If a 3K ohm 10 watt resistor is not available, two 6K ohm 5 watt resistors can be used in parallel across the LO and GND terminals.

6. Install the nuts removed from the LO and GND terminals.

7. Install the power input box access cover removed in step 2. Use a No. 1 Phillips screw driver for the installation of the screws.

8. Close the wind sensor electronics enclosure.

9. Restore power to the wind sensor inside the DCP cabinet. Ensure that the circuit breaker is set to the left, for the **ON** position.

   This completes the modification.

10. Make appropriate entries in the **SYSLOG** using the Maintenance Action keys, Field Modification keys, and comment field.

Follow these steps:

1. Log on as **TECH** once the modification has been completed.
2. Key the **MAINT** screen
3. Key the **ACTION** page
4. Key **FMK**- Enter the modification as follows MOD 29.
   On the second line of the screen verify that only MOD 29 is displayed.
   Complete by entering Y in the Y/N if only MOD 29 is displayed.
5. Check the **SYSLOG** and verify the FMK message. Clear any maintenance flags or errors caused by this modification. Notify the **AOMC** via a telephone that MOD 29 is complete.

REPORTING MODIFICATION

Target date for completion of this modification is 30 days after receipt. Report completed modification on WS Form A-26 maintenance record, per instructions in EHB-4, Part 2, Appendix F, using reporting code **AWIND**.

Acting Chief, Engineering Division
W/OSO321:AJWissman:rhz:6/14/95:corrected 6/30/95:disk HB 11-F,
"asosmod29.h11"spellchecked:redone 7/3/95:7/5/95